Good Display Specifications

Type: Standard
Model No. GD70MLXD

Description:
- 7.0”, 800 x 480dots, TFT LCD module.
- With white LED backlight
- VGA and VIDEO input.

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Good Display

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Catalogue

Content ····· 2

Version Modification ····· 3

1. Profile ····· 4

2. Application ····· 4

3. Main Parameter ····· 4

4.Circuitry Pane Diagram、Product Picture ····· 5

5. Wiring Diagram ····· 6

6. Connector Definition for Driver Board ····· 6-9

7. Structural Diagram ····· 10-11

8. The Determinant Standard of 7" TFT- LCD Panel ····· 12-13

9. Packing Method ····· 14

10.Attention ····· 14

Version

Date	Version	Content
2008-3-20	RD001	The First Version
2008-5-28	VER:1.00	The Second Version
2009-8-7	VER:1.01	The Third Version

1.Profile:

GD70MLXD Ver:1.01 7.0" Color TFT LCD Module is composed of JD70MLXD driver board Ver:1.01 and 7" Digital TFT LCD Panel GTI070TN82 V.1, This module provides users with Video and VGA signal input and automatic identifying and converting of NTSC/PAL systems, built-in OSD(on-screen display) function,and the OSD menu offers adjustment of brightness, contrast and color. The power control IC is designed for better reliability.

2. Application:

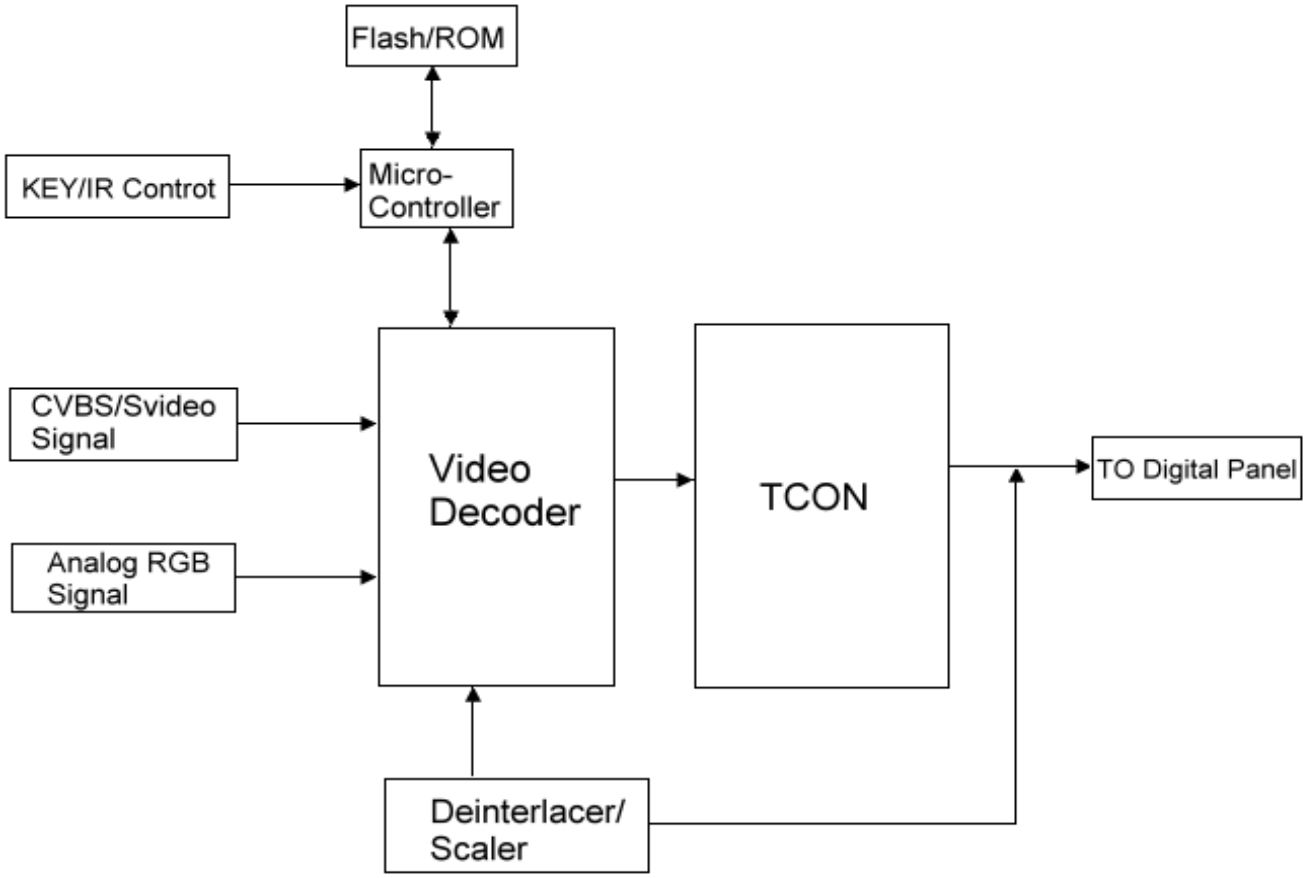
GD70MLXD TFT LCD Module can applier for as follows:

- Office Electronic Equipments
- Instrumentation and Measuring Equipment
- Machinery Equipment
- Audiovisual Equipment （LCD Advertising Player, Portable DVD Player）
- Home Appliances

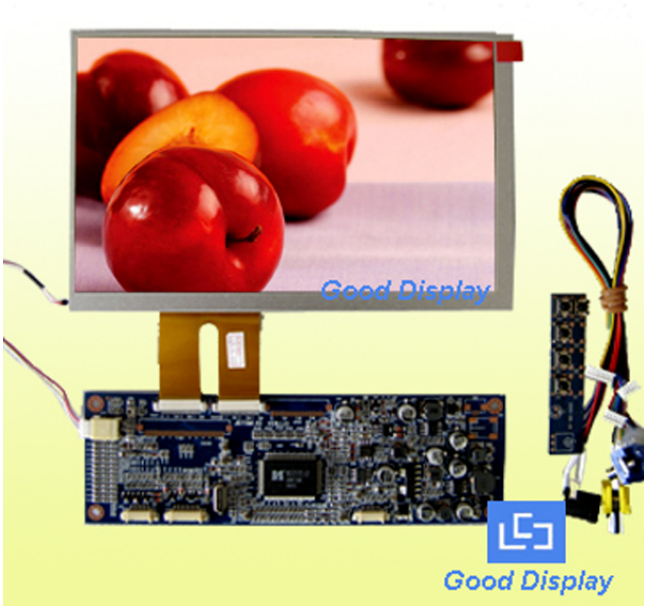
3. Main Parameters:

- Product name：7" TFT-LCD Module
- Module model : GD70MLXD
- TFT Display: 7” TFT LCD GTI070TN82
- Backlight: LED
- Resolution: 800×3RGB×480
- View Angle Ø:（up /down/left /right 50/70/70/70）
- Brightness: >250 cd/m^2
- System Format: PAL/NTSC switch automatically
- Signal type input: VGA, VIDEO
- Video Input: 1.0Vp-p 75 ohm
- Power Supply Voltage: DC 12V +/- 25% (Type 12V 340mA±30mA)
- Dimension of Active Area(mm): 152.40（H）×91.44（V）
- Overall Dimension of LCD(mm): 165（W）×104（H）×5.5（D）
- Structural Dimension of PCB without VGA height (mm): 160.0(W)×59.9（H）×6.6（D）
- Operaton Temperature: -20~+70℃
- Relative Humidity: 5~95% RH
- Storage Temperature: -30℃~+80℃

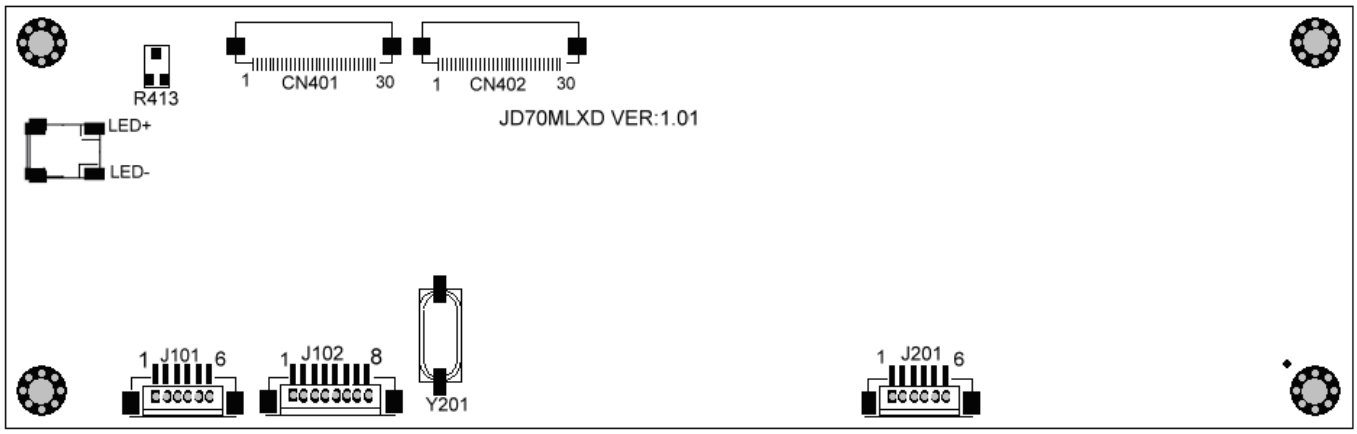
4.Circuit Pane Diagram:



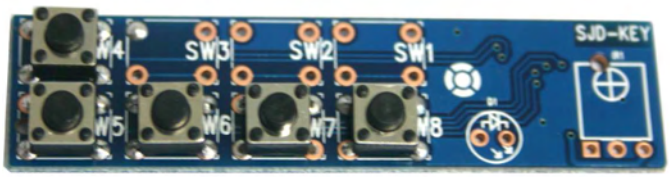
GD70MLXD TFT LCD Module's Picture:



5.Wiring Diagram:



Key-press board:



The Definition of Key-press:

Pin No.	Symbol	Description	Remark
1	SW4	AV Switch	
2	SW5	Power Supply	
3	SW6	Menu	
4	SW7	+	Up
5	SW8	-	Down

Menu key display:

6. Connector Definition for Driver Board:

6.1 J201 Connector Definition:

Pin No.	Symbol	Input/Output	Description	Remark
1	+5V	O	+5V power supply output	
2	IR	I	Remote control input	
3	GND	-	Ground	
4	SAR0	I	Key-press input	
5	SAR1	I	Key-press input	
6	NC	-	Empty	

6.2 J101 Connector Definition:

Pin No.	Symbol	I/O	J101 Description	Remark
1	R	I	VGA-R	
2	G	I	VGA-G	
3	B	I	VGA-B	
4	GND	-	GND	
5	VS	I	VGA-VS	
6	HS	I	VGA-HS	

6.3 J102 Connector Definition:

Pin No.	Symbol	I/O	Description	Remark
1	+12V	I	+12V Power supply input	
2	+12V	I	+12V Power supply input	
3	GND	-	Ground	
4	GND	-	Ground	
5	Video	I	Video input	
6	Y	I	Y Signal input	
7	C	I	C Signal input	

8	GND	-	Ground	

6.4 CN401 Connector Definition:

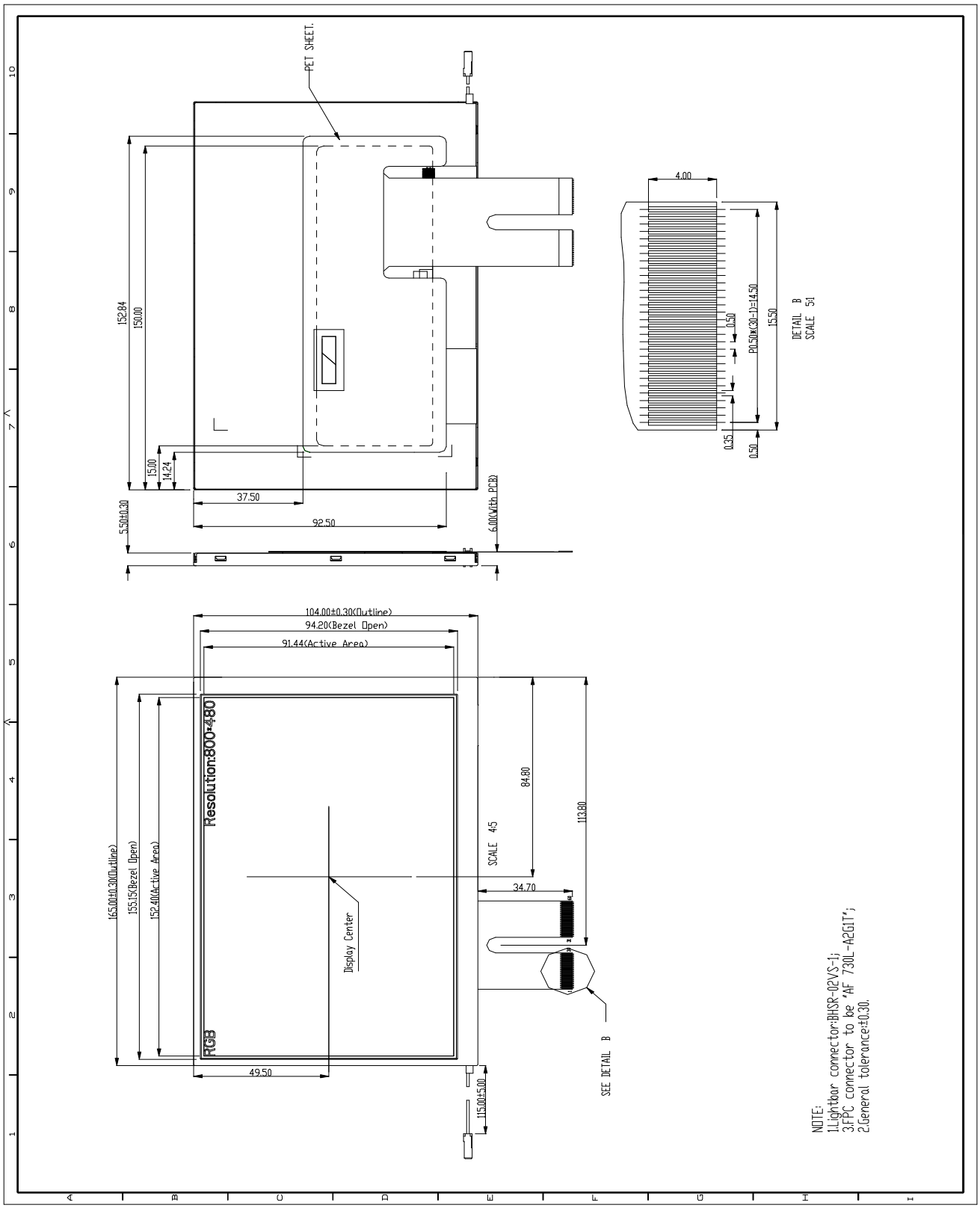
Pin No.	Symbol	I/O	Function	Remark
1	POL	I	Polarity selection	
2	STVD	I/O	Vertical start pulse input when U/D= H	Note 1
3	OEV	I	Output enable	
4	CKV	I	Vertical clock	
5	STVU	I/O	Vertical start pulse input when U/D= L	Note 1
6	GND	P	Power Ground	
7	EDGSL	I	Select rising edge or falling edge	
8	VCC	P	Power Voltage for Digital Circuit	
9	V9	I	Gamma voltage level 9	
10	VGL	P	Gate OFF voltage	
11	V2	I	Gamma voltage level 2	
12	VGH	P	Gate ON voltage	
13	V6	I	Gamma voltage level 6	
14	U/D	I	Up/down selection	Note 1,2
15	VCOM	I	Common voltage	
16	GND	P	Power Ground	
17	AVDD	P	Power Voltage for Analog Circuit	
18	V14	I	Gamma voltage level 14	
19	V11	I	Gamma voltage level 11	
20	V8	I	Gamma voltage level 8	
21	V5	I	Gamma voltage level 5	
22	V3	I	Gamma voltage level 3	
23	GND	P	Power Ground	
24	R5	I	Red data(MSB)	
25	R4	I	Red data	
26	R3	I	Red data	
27	R2	I	Red data	
28	R1	I	Red data	
29	R0	I	Red data(LSB)	
30	GND	P	Power Ground	

6.5 CN402 Connector Definition:

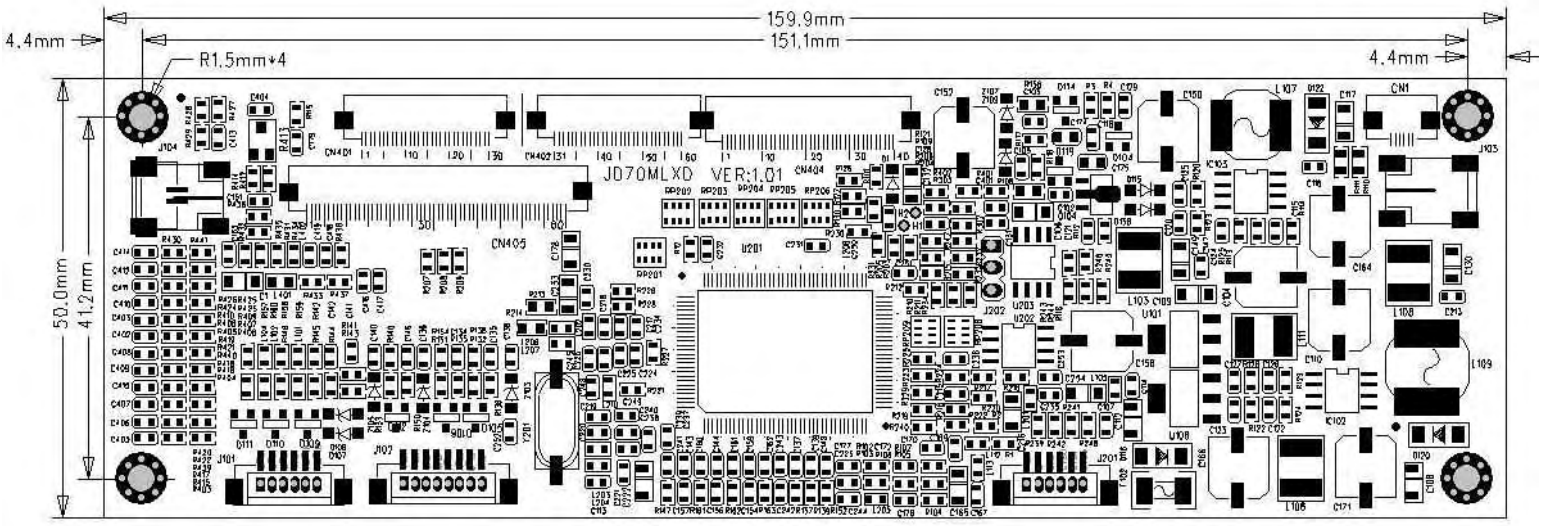
Pin No.	Symbol	I/O	Function	Remark
1	GND	P	Power Ground	
2	G5	I	Green data(MSB)	
3	G4	I	Green data	
4	G3	I	Green data	
5	G2	I	Green data	
6	G1	I	Green data	
7	G0	I	Green data(LSB)	
8	STHL	I/O	Horizontal start pulse input when R/L = L	Note 1
9	REV	I	Control signal are inverted or not	Note3
10	GND	I	Power Ground	
11	DCLK	I	Sample clock	
12	VCC	P	Power Voltage for Digital Circuit	
13	STHR	I/O	Horizontal start pulse input when R/L =H	Note 1
14	LD	I	Latches the polarity of outputs and Switches the new data to outputs	
15	B5	I	Blue data (MSB)	
16	B4	I	Blue data	
17	B3	I	Blue data	
18	B2	I	Blue data	
19	B1	I	Blue data	
20	B0	I	Blue data (LSB)	
21	R/L	I	Right/ left selection	Note 1,2
22	V1	I	Gamma voltage level 1	
23	V4	I	Gamma voltage level 4	
24	V7	I	Gamma voltage level 7	
25	V10	I	Gamma voltage level 10	
26	V12	I	Gamma voltage level 12	
27	V13	I	Gamma voltage level 13	
28	AVDD	P	Power Voltage for Analog Circuit	
29	GND	P	Power Ground	
30	VCOM	I	Common voltage	

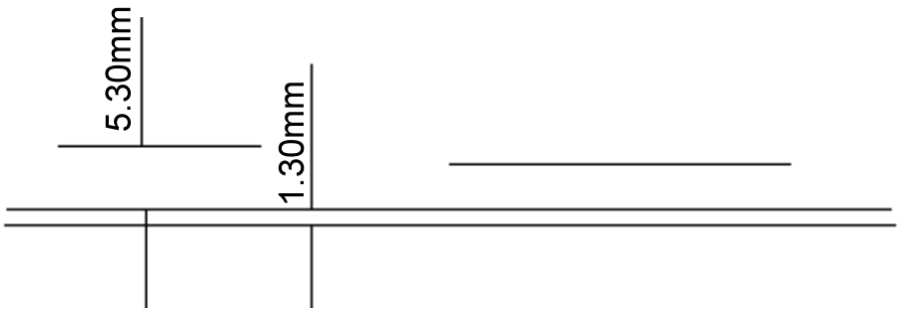
7. Structural Diagram:

7.1TFT LCD Panel:



7.2 PCB Structural Diagram:





8. 7" TFT- LCD Panel Determinant standard:

Aim：Establishing the standard of PANLE for inspecting material & progress and for clients' inspection.

Scope：Apply to 7″ TFT LCD

Content：

8.1. Determinant standard and method：

8.1.1. The method and determinant of inspecting the nick of panel of LCD：

8.1.1.1. Inspect vertically (or at 45°angle from left/right)under the light tube (the power is 20 W) in the distance of 30cm to the panel. If there is no nick , it determines "OK". Otherwise "NG".

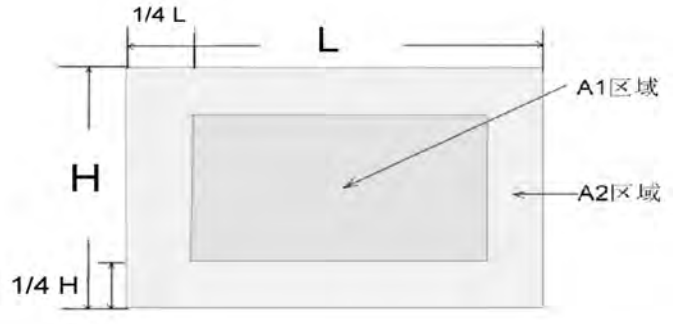
8.1.2. The method and determinative for black & white & color spots for the Panel of LCD：

8.1.2.1. Inspecting method

8.1.2.1.1. Black spots：under status of denote light，set the MASK of black spot inspection near the black spot then compare the big and small by eyes.

8.1.2.1.2. White & Color spots: under status of denote light, set the Mask of black spot inspection on the white spot(or color spot) then inspect them by eyes if it can hide.

8.1.2.2. Division of LCD Panel:



Remark：Area of A1：The center of the available area for the picture

Area of A2：The edge of the available area for the picture（around the central area）

8.1.3. Determinant Choice

Spot Diameter（mm）		Allowed Area	
		A1	A2
Black Spot	d≤0.15	Irrespective	Irrespective
	0.15<d≤0.3	4	4
	0.3<d≤0.5	2	3
	0.5<d<0.8	0	1
White or color spot	d≤0.15	Irrespective	Irrespective
	0.15<d≤0.3	3	3
	0.3<d≤0.5	1	2
	0.5<d<0.8	0	1

Remark: 1. Size: Average Diameter=（Max. Diameter + Min. Diameter）/2

2. Using information above as a standard in order to judge while the spot are dense.

3. Black & White spot：To judge the obvious spots through the change of voltage by comparison。

4. Total quantity of Black & white & color spot: A1+A2 ≤ 4。

9.Packing:

TBD

10. Attention:

1. The voltage of supply power don't exceed maxmium limit.
2. The connector can’t connect board in reverse,or the board will be burnt and the products can't funtion well.
3. Please don’t touch it in order to keep your skin non-burn when you electrify the board(there is High voltage on the board).
4. 7" TFT LCD Panel,it is a electric product,so you need to take anti-static measure when you operate it.
5. 7.0" TFT- LCD Panel is a glasswork, place carefully, broken for fear.
6. The connection if “FPC”, which connect 7" TFT LCD Panel to PCB. Please operate it carefully in order to keep it well.

7.Don't touch the pin of "variable resistor" when you adjust "VR".